

Analysis of traditional vs. 'click and collect' grocery services

Honors Undergraduate Thesis

Presented in Partial Fulfillment of the Requirements for the Degree with Honors Research
Distinction in Marketing in the Fisher College of Business of The Ohio State University

By
Erica Marie Toth

The Ohio State University

2016

Thesis Committee:

Kenneth Boyer, Advisor
Patricia West
Vasu Unnava

Copyrighted by
Erica Marie Toth
2016

Abstract

Grocery has always been recognized as one of the most competitive industries and, as retailers innovate new ways to get their goods in the hands of the consumer, it is only getting more competitive. In the past five years, online grocery sales have grown at an annual rate of 16.6% and the growth is projected to continue. The 'click and collect' method in comparison to in-store shopping has been studied previously, with research indicating substantial differences in how two groups of customers view the same retailer. Previous research has found that online customers view service quality and convenience more favorably and are more loyal than traditional customers, while traditional customers view product quality and product range quality better than online customers. Much of this research was completed over half a decade ago, and because of the rapid advancement and adoption of technology, this study aims to reexamine the differences between these two customer groups in relation to how they view a specified retailer and what behavioral intentions result from these perceptions. A survey was created and distributed online to collect data from 215 participants that have shopped at the designated retailer either in-store, through the 'click and collect' method, or both. A few differences from the original research were seen from the results gathered; there was no observed difference in how these two groups of customers view the grocer on range quality, or the sacrifice they make by selecting the retailer as their grocer. The study also yielded a significant difference in online customers viewing the quality of products ordered higher than those that shop in-store. These studies of customer perceptions provide information for grocery retailers to improve their future strategies to held them attract and maintain customers, which is very important in the competitive environment.

Acknowledgements

I would like to sincerely thank my research committee, Dr. Kenneth Boyer, Dr. Vasu Unnava, and Dean Patricia West, for the guidance and feedback they were gracious enough to give me during this process. Without your constant motivation to push my research farther, my thesis would not be what is it.

Vita

May 2012Strongsville High School

March 2016First Place, Business/Education and Human
Ecology/Speech and Hearing Science Category,
Denman Undergraduate Research Forum

May 2016BSBA Marketing, The Ohio State University

June 2016Incoming Assistant Marketing Manager at
Scotts Miracle-Gro

Fields of Study Major Field: Marketing & Logistics

Table of Contents

Abstract.....	iii
Acknowledgements.....	iv
Vita.....	v
List of Tables.....	vii
Introduction.....	1
Literature Reviewed and Hypotheses.....	2
Methodology.....	7
Results.....	9
Discussion and Conclusion.....	12
References.....	16
Appendix.....	19

List of Tables

Table I. Sample characteristics.....	6
Table II. T-test of operational dimensions.....	10
Table III. Predicting customer intentions.....	12

INTRODUCTION

With business challenges such as increased competition, low margins, a dependence on discount, and low population growth the landscape of the grocery industry is changing. The consumer's time is becoming more valuable and many companies are beginning to develop business plans that will turn saved customer time into revenue. Through these insights, grocery retailers have been introducing additional services, implementing loyalty programs, and improving checkout lanes to maintain their market share (Grocery Stores & Supermarkets). This has also led to an increase in online grocery shopping in the United States. Currently the \$570 billion a year grocery industry sees 2-3% of its revenues coming from online ordering (Nielson Newswire). The fascination with online grocery shopping started during the early 2000's dot com boom, but after failed logistical infrastructure and collapse, the United States has shied away from the concept until recently (Bercovici 2014).

While companies like Peapod and Instacart have emerged to bring the groceries directly to the consumer, brick-and-mortar grocers have also developed an online system with order pick-up to save on the operational costs of execution. These two methods have been making quite an impact. According to IBISWorld, online grocery sales have grown at an average rate of 16.6% to \$13.1 billion (McKitterick 2015). With this growth expected to continue, it is important for grocers understand their customers' preferences so they can better match their strategy with customers' expectations.

In 2005, a study was conducted in *Extending the Supply Chain: How Cutting-Edge Companies Bridge the Critical Last Mile into Customers' Homes* to determine if there were significant differences in online and traditional customers perceptions of Lowe's Food, a grocery chain located in North Carolina. The study ultimately concluded that customers that

use the click-and-collect method rate convenience as a more important reason for selecting a grocer than price, compared to traditional customers who view these as equal. The study also found that online customers perceive a better service quality and are more loyal to the grocer, but it is the traditional customers that have a better perception of the product assortment and availability (Boyer).

In 2007, an analysis and more extensive study of three grocers was conducted and published in *Direct Marketing: An International Journal*. This study tested six similar hypotheses about the importance of price and convenience, perceptions of service quality, product quality, product range quality, and customer sacrifice. Results from this study proved it significant that online customers view service quality and convenience more favorably than traditional customers, but traditional customers view product quality and product range quality better than online customers (Prud'homme, Boyer, and Hult). These results are consistent with the Lowe's Food study conducted in 2005. The purpose of this study is to replicate these studies to see how results have differed from 2007. An Ohio grocer that offers a click-and-collect system, referred to throughout this paper as Grocer X, was selected and customers were surveyed through online methods.

LITERATURE REVIEWED AND HYPOTHESES

Price and Convenience

Price one of the most important factors a customer considers when deciding where to shop for food (Grocery Stores & Supermarkets). Because of this grocery retailers have been engaging in price-based competition the past couple of years, which has led to decreased margins and a necessity to increase volume in order to remain profitable. As the economy

continues to get better after the financial crisis of 2008, some stores have added a large selection of prepared food, dry cleaning services, child-care, and the an online ordering system as a way to increase customer convenience and justify higher prices (Mass Grocery Retail).

As found in a US consumer study, 70% of respondents attributed the primary reason they grocery shopping online was because of the convenience and time saved (Morganoksy and Cude 2000). Because the online customers value ways to save time, it is hypothesized that those who use the click-and-collect service will place a greater importance on the convenience of the grocer selected than those that shop in-store. Alternatively, in-store customers will place more weight on the stores prices than online customers, who in most cases pay an extra fee to have their groceries picked and ready for them when they arrive to pick-up.

H1_a: The importance of price in selecting a grocer will be greater for in-store customers than it will be for online customers.

H1_b: The importance on convenience in selecting a grocery will be greater for online customers than it will be for in-store customers.

Customer Service Quality

A grocer focusing on providing a high level of service has been linked to seeing an increase in brand-equity (Allaway, Huddleston, Whipple, & Ellinger). That brand equity then manifests into increased customer loyalty, which has many positive implications for a brand such as a generation of positive word-of-mouth, a willingness to continue shopping even if prices increase, and increased frequency of store patronage. While high service levels have been linked to building a loyal customer base, the experience of grocery shopping as become

increasing impersonal as grocer's continue to get bigger and bigger. With the creation self-check out, it is possible that a customer may not interact with a store employee once during their shopping trip. As outlined by Prud'homme, Boyer, and Hult (2007) customers may view ordering their groceries online as interaction with the grocery company as a whole and may be find that the contact they have with the store employee during the "moment of truth" (i.e. when the employee is helping them load their groceries in the car) to be more personalized. Therefore, it is hypothesized that the service level perceptions of online customers will be greater than those that just shop in store.

H2: Online customers will perceive service quality to be greater than in-store customers.

Product Offering Quality

One of the main reasons customers shy away from online and click-and-collect grocery methods is because they are hesitant about having others shop for their groceries. In a recent Mintel report, a millennial female was quoted saying: "One of my main concerns [in regards to online grocery], however, was someone else choosing my meat and produce. Will the grocery send me nearly bad apples? Will he pick out a fatty piece of steak?" (Smith 2015). While there is typically a section where the customer ordering their groceries online can specify special requests in regards to the product they are ordering, the nature of product quality is seen differently between individuals, making it difficult for the personal shoppers of online grocers to pick the "right" perishable item for the customer. This lends itself to the hypothesis that in-store customers will perceive a higher product quality than customers that shop online for their groceries.

H3: In-store customers will perceive the product quality to be higher than online customers.

Range of Products Quality

In 2014 the average supermarket stocked over 42,000 different SKUs, and maintaining that inventory to avoid stock-outs and spoilage often comes at a higher cost (Food Marketing Institute). With a rise in consumer importance on convenience, industry trends have developed two different methods concerning the range of products they carry to get customers in the door; smaller format stores, which offer a smaller selection and expanding traditional supermarkets to carry the largest range of products. Some of the larger format stores carry over 400 brands of cheeses alone (Webster). With these larger format stores that offer an extensive product line, it is increasingly difficult to manage the number of out-of-stock customers face. These out-of-stocks ultimately lose sales and customers for both the retailer and the manufacturer (Corsten and Gruen, 2003). This is because when faced with an out-of-stock customer reactions range from substituting product brand or variant, switching to a different retailer to make the purchase, or even delaying the purchase (Kucuk, 2008).

When an online customer places an order, they are fully expecting the items they request to be in stock, which is not always the case. When the personal shoppers who fulfill online orders are faced with an out-of-stock, it is very unclear how the customer would like to them to respond, making it more challenging. These differences between how the customer groups view the product range and out-of-stock is outlined below in the fourth hypothesis.

H4: In-store customers will perceive product range quality to be higher than online customers.

Customer Sacrifice

The three factors influencing the sacrifice customer feel they are making by shopping at a particular grocer include their cost of time, travel, and the price they pay for products (Palmer 2000). Following this ideology, click-and-collect customers save a lot of time in the grocer by ordering online, and even though they may pay an extra fee for the service, it is hypothesized below that will view the sacrifice they make by shopping at Grocer X to be lower than those that shop in-store.

H5: Perceptions of customer sacrifice will be lower for online than in-store customers.

Outcomes

While the importance of grocery store attributes may depend on the type of trip, major vs. fill-in, the operational dimensions explored above ultimately drive customer loyalty (Nilsson, Gärling, Marell, and Nordvall 2015). This loyalty is crucial to players in the grocery industry because margins are so thin and competition is so fierce (Hurley 2015). Service quality, product quality, range quality, and sacrifice all portray a customer's feeling toward the retailer, and with that information, according to the Theory of Planned Behavior (Ajzen 1985, 1991) and Theory of Reasoned Action (Fishbien and Azjen 1975), we can use that information to predict future behavioral intentions. The hypothesis below expects that we can use the surveyed operational dimensions to predict the future actions of Grocer X's customers.

H6: The independent variables of service, product range and quality, and sacrifice can be used to predict customer behavioral intentions.

METHODOLOGY

Sampling Method

Data for the study was collected through an online questionnaire and was distributed to participants through location and grocer specific social media groups, other online forums, and email. After a month of data collection, 218 responses were collected, with 166 of the respondents indicating that they had shopped only in-store at Grocer X. Another 49 respondents had indicated that they had shopped both in store and through the grocer's online ordering system. There were no respondents that indicated they had only shopped at the grocer through their click-and-collect method, and three respondents had indicated that they had never shopped at Grocer X. Therefore, the group of respondents (N=215) makes up the final sample for analysis.

Measurement

The survey opened with one screening question intended to reveal whether the respondent had ever shopped at Grocer X. Respondents were asked to clarify if they had shopped at Grocer X "in-store only," "through click and collect only," "both in-store and through click-and-collect," or "never". All respondents who answered "never" were permitted to leave the questionnaire. Customers that answered "both in-store and through click-and-collect" make up the sample of online customers.

The study's variables had measurements taken from the previous studies and were replicated in this study. The importance of 19 store attributes considered when choosing Grocer X were measured on a ten-point scale in terms of how much the participants agreed with the statement, with a value of 10 expressing strong agreement and a value of 1 expresses strong disagreement. Survey participants were asked just to consider their experiences with

Grocer X while completing the questionnaire. Demographic data including gender, age, education level, and income were also collected, and can be found in Table I.

Variable	Level	Frequency	Percent	In-store	Online
Gender	Male	107	50%	52%	49%
	Female	105	50%	48%	51%
	Total	212	100%	100%	100%
Age	Under 18 years	0	0%	0%	0%
	18 to 24 years	48	23%	26%	13%
	25 to 44 years	144	69%	66%	75%
	45 to 64 years old	17	8%	8%	10%
	65 years and over	1	1%	0%	2%
	Total	210	100%	100%	100%
Education	Less than High School	0	0%	0%	0%
	High School / GED	9	4%	4%	6%
	Some College	51	24%	24%	20%
	2-year College Degree	21	10%	9%	12%
	4-year College Degree	92	43%	45%	39%
	Advanced Degree	40	18%	18%	22%
	Total	213	100%	100%	100%
Income	Below \$20,000	27	13%	13%	8%
	\$20,000 - \$29,999	23	11%	12%	8%
	\$30,000 - \$39,999	34	16%	18%	10%
	\$40,000 - \$49,999	23	11%	13%	4%
	\$50,000 - \$59,999	24	11%	10%	16%
	\$60,000 - \$69,999	18	8%	7%	12%
	\$70,000 - \$79,999	19	9%	3%	2%
	\$80,000 - \$89,999	6	3%	16%	24%
	\$90,000 or more	38	18%	8%	14%
	Total	212	100%	100%	100%

Table I.
Sample characteristics in-store vs. online customers

Analysis

Both descriptive and inferential statistics were used to analyze the differences between Grocer X customers that shop exclusively in store and those that shop in store and through the click-and-collect service. To determine if the difference in means between the two customer groups was significant a T-test was used. To test the final hypothesis multiple linear regression was used to see how much variance each factor explained in regards to behavioral intentions and percent of business a customer gives Grocer X.

RESULTS

Price and Convenience

It is observed in Table II that customers that shop at Grocer X using the click-and-collect method place a significantly higher importance on convenience than customers that just shop in-store. While in the original study found that in-store customer placed a higher importance on price than click-and-collect customers, the results from this study show that when considering a grocery there is no significant difference between the two groups in terms of the importance they place on price. It can also be observed from the data that, similar to the original study, price is not the most important factor considered when selecting a grocer. Overall these results show support for H1_b, but not H1_a.

Customer Service Quality, Product Offering Quality, Range of Products Quality, and Customer Sacrifice

The next four hypotheses test the differences between how in-store and click-and-collect customers perceive Grocer X on their operational dimensions. As seen in Table II, Grocer X customers that have shopped using the online ordering and pick-up method have rated the grocer significantly better in customer service than customers that have just shopped in-store. This is consistent with previous studies, and shows support for H2.

In regards to product offering quality by the grocer, there were significant results between the two different customer groups, but it can be seen from the data in Table II that online customers perceive a higher product quality than in-store customer. This is contradictory to H3 and previous research, which predicts and found that in-store customers

	Customer type		t-score	p-value
	In-store n=166	Online n=49		
Selection Criteria	14.47 (3.29)	15.42 (2.24)	-1.76	0.08
Price of products are important when selecting Grocer X	6.95 (2.24)	6.90 (2.14)	0.153	0.06
Convenience is important when selecting Grocer X	7.84 (1.95)	8.52 (1.76)	-2.16	0.03*
Service Quality	34.03 (11.29)	39.18 (10.09)	-2.87	0.00**
<i>Cronbach's Alpha</i>	<i>0.934</i>	<i>0.892</i>		
SQ1: Grocer X employees are responsive to my service requests	6.60 (2.44)	7.83 (2.41)	-3.074	0.00**
SQ2: Grocer X employees are competent in providing the expected service	6.92 (2.45)	8.36 (1.74)	-3.76	0.00**
SQ3: Grocer X employees are courteous in providing me service	7.43 (2.32)	8.25 (2.29)	-2.15	0.03*
SQ4: Grocer X employees are able to answer my service-related questions	7.32 (2.22)	8.02 (2.12)	-1.90	0.06
SQ5: The tangible (appearance of trucks, staff, products) of Grocer X's service are excellent	7.43 (2.17)	8.04 (1.92)	-1.76	0.08
Product Quality	14.24 (4.47)	15.90 (4.04)	-2.31	.022*
<i>Inter-Item Correlation</i>	<i>0.753</i>	<i>0.810</i>		
PQ1: Grocer X has an excellent assortment of products	7.91 (2.10)	8.43 (2.09)	-1.47	0.14
PQ2: Grocer X's products are among the best	6.58 (2.35)	7.65 (1.99)	-2.9	0.01**
Product Range	14.60 (4.28)	15.35 (4.01)	-1.082	0.28
<i>Inter-Item Correlation</i>	<i>0.668</i>	<i>0.702</i>		
RQ1: Grocer X has a sufficient range of product choices (I can get what I want)	7.72 (2.17)	8.35 (2.00)	-1.812	0.07
RQ2: The number of substitutions out of stocks is reasonable	7.01 (2.38)	7.16 (2.07)	-0.40	0.69
Sacrifice	17.42 (6.85)	19.12 (6.84)	-1.529	0.128
<i>Cronbach's Alpha</i>	<i>0.789</i>	<i>0.836</i>		
SQ1: Grocer Xs' prices are low on the products they offer	4.45 (2.51)	5.70 (2.74)	-2.88	0.00**
SQ2: The time needed to make a purchase from Grocer X is low	6.48 (2.64)	6.84 (2.49)	-0.84	0.40
SQ3: The effort required to make a purchase from Grocer X is low	7.05 (2.58)	7.08 (2.40)	-0.80	0.94
Behavioral Intentions	19.39 (9.93)	25.16 (9.05)	-3.65	0.00**
<i>Cronbach's Alpha</i>	<i>0.807</i>	<i>0.769</i>		
BQ1: I would classify myself as a loyal customer of Groc	5.62 (3.25)	7.69 (2.39)	-3.86	0.00**
BQ2: I do not expect to switch to another grocer to get a better service in the future	5.51 (3.21)	7.06 (2.71)	-3.00	0.00**
BQ3: I would continue to do business with Grocer X, even if I had to pay more	3.83 (2.87)	5.39 (2.76)	-3.26	0.00**
BQ4: I would complain to Grocer X employees if I experienced a problem with their service	5.97 (3.13)	7.02 (2.785)	-2.07	0.04*
Percent of business				
PQ1: What percent of your grocery shopping do you do with Grocer X?	55.88 (30.38)	70.08 (24.16)	-2.97	0.00**

Table II.
T-test of
operational
dimensios

Notes: * $p < 0.05$; ** $p < 0.01$. All items are rated on a Likert scale ranging from 1=strongly disagree to 10=strongly agree: mean (SD); the selected grocers name was inserted wherever Grocer X appears

rate the quality of Grocer X's products higher than those that shop through click-and-collect. The last two operational dimensions, range of product quality and customer sacrifice, yielded results that were not significant. This means that the perception of online and in-store customers have about the range of products Grocer X carries and the sacrifice they make by choosing them as their grocer, are not statistically different from each other. This results in inconsistent with the previous research and does not support H4 and H5.

Behavioral Intentions and Outcomes

The final two hypotheses, H6_a and H6_b, test how much the four operational variables, customer service, product quality, product range, and sacrifice predict behavioral intentions and the percent of business a customer gives Grocer X. Unlike previous studies that have been conducted, none of the six regression equations predict a significant amount of the variance. It is also observed in Table III (A) that the only significant predictor of click-and-collect customers' behavioral intentions is the perception of customer sacrifice. This differs from the in-store predictor of behavioral intentions, which is product quality. In the original study conducted, all operational dimensions were significant predictors for online customers behavioral intentions, while in-store customers had significant predictors of just product quality and sacrifice.

A look at how the operational dimensions can be used to predict the percent a business a customer will give Grocer X can be found in Table III (B). This study found that, for online customers, the only significant predictor of how much business they will give the specified grocer is the level of customer service they receive. Again, this is different from the only significant predictor used for in-store customers, which in this case is sacrifice. Again, these results are inconsistent with the original study conducted, which found that for online

customers service quality, product quality, and sacrifice were significant predictors, and in-store customers only had the significant predictor of product quality.

	Combined	Online	In-Store
<i>(A) Behavioral intentions as dependent variable</i>			
Constant	1.64**	9.913	0.806
Service quality	0.093	0.258	0.035
Product quality	0.643**	0.224	0.724**
Range quality	-0.243	-0.532	-0.170
Sacrifice	0.565**	0.500*	0.558**
R ² Adjusted	0.348	0.189	0.365
<i>(B) Shopping Percentage as dependent variable</i>			
Constant	24.59**	29.978	25.581**
Service quality	0.087	0.925*	-0.160
Product quality	1.467	-0.044	1.573
Range quality	-1.25	-0.750	-1.226
Sacrifice	1.601**	0.833	1.819**
R ² Adjusted	0.168	0.143	0.174

Table III.
Predicting customer intentions

Notes: * $p < 0.05$; ** $p < 0.01$.

DISCUSSION AND CONCLUSION

There were more than a few significant differences between the studies previously completed by Prud'homme, Boyer, and Hult (2007) and the study conducted in this paper. These differences may result from the rapid advancement and adoption that has taken place between the two studies. Since the first study, mobile technology use has exploded which translates to almost every consumer having a small portable computer in their pockets at all time. Technology has evolved to the point that consumers expect things to happen instantaneously online, and if they take even a second longer than they think they should they abandon it. This is supported from the insight that the only significant predictor of behavioral intention for online customer is the sacrifice they are making by shopping at Grocer X. In getting results of favorable behavioral intentions for online customers Grocer X should

consider things such as increasingly speed of online ordering systems through saved list features and organization of products in ways that reduce the time and effort the customer needs to exert to order their groceries.

Another change technological advancement has yielded is the craving customers have for excellent service quality. Since many customers spend all day behind their devices, they are "human interaction starved" which gives grocery retailers the opportunity to satisfy this craving through outstanding customer service. This is supported from the insight that customer service is the only significant predictor of the customer's loyalty to Grocer X. This change and finding also suggests that grocers need to handle their moment of truth with online customers especially very carefully, as it will determine whether or not the customer continues to patron their store. Customer service improvements could be anything from using the customer's name, ensuring the products selected from them meet their standards, and properly handling situations when products were not selected to the customer's standards.

Technological advancement has also taken place inside grocery retailers. One technology that is gaining traction is Radio Frequency Detection Identification (RFID), which is used to keep track of inventory, allowing it to be more efficiently tracked (Feng, Yao, Jiang, and Talluri 2013). This implication suggests that due to the ease of tracking inventory, more products can be offered to both online and in-store customers, resulting their perceptions of Grocer X's product range quality to be the same.

In terms of product quality, it should be noted that in this study both customer groups are getting products from the same grocer, in the same traditional format. The difference is that online customers are not the ones selecting their groceries, and instead put their trust in a personal shopper. Since they have given up that control the original hypothesis (H3) stated

that in-store customers would find a higher perceived quality of products, when the results yielded the opposite. One theory that could explain this result is that customers that use click-and-collect are considering the overall value of the products they purchased from the grocery, specifically taking the time they saved by ordering their groceries online into consideration. In the context of this study, the stores that Grocer X offers their click-and-collect services at are their largest format stores, which could translate into longer time spent in the store, or time saved by online customers.

Limitations

There were a few limitations with the study that was conducted. The first being the small sample size of customer that have used the click-and-collect service provided by Grocer X. The service has only been around at this particular grocer for about three and a half years, and is only offered in a handful of locations throughout Ohio, Pennsylvania, and Indiana. This made finding respondents who had used the service quite challenging, leaving their inputs underrepresented. The second limitation is that the study was only focused on the differences in customer perception between the two groups who shopped at once specified retailer. This makes generalizing the results across different grocery providers more difficult.

Managerial Implications

Insights from this study have a few practical implications for Grocer X. It can be seen from the data that online customers place a higher importance on convenience than in-store, and for that they are willing to pay a premium to get it. This means that Grocer X can get away with charging a convenience fee for their click-and-collect service as a way to add marginal profits to their bottom line. This will also help the grocer differentiate itself on a term other than price, and in the industry where price wars are very common, this can be very important to Grocer X.

As a way to drive loyalty, Grocer X needs to focus on providing the highest level of customer service to their online customers and need to focus on lower the perception of sacrifice in-store customers face by choosing them as their grocer. Both of these attributes were the only significant predictors of customer loyalty. It was also observed in the study that customers that utilize Grocer X's click-and-collect service get a larger share of the customer wallet at 70.08% of business compared to the 55.82% share of in-store customer's wallets. This finding could be used to convince the retailer to attempt to convert more of their patronages to try to the online service, as a way to increase wallet share, and ultimately contributed to Grocer X's bottom line.

REFERENCES

- Aastrup, Jesper, and Herbert Kotzab. "Analyzing Out-of-stock in Independent Grocery Stores: An Empirical Study." *International Journal of Retail & Distribution Management* 37.9 (2009): n. pag. *Emerald Insight*. Web. 26 Jan. 2016.
- Ajzen, I. (1985), "From intentions to actions: a theory of planned behavior", in Kuhl, J. and Beckman, J. (Eds), *Action-Control: From Cognition to Behavior*, Springer, Heidelberg, p. 11.
- Ajzen, I. (1991), "The theory of planned behavior", *Organizational Behavior and Human Decision Processes*, Vol. 50, p. 179.
- Arthur W. Allaway Patricia Huddleston Judith Whipple Alexander E. Ellinger, (2011), "Customer-based brand equity, equity drivers, and customer loyalty in the supermarket industry", *Journal of Product & Brand Management*, Vol. 20 Iss 3 pp. 190 - 204
- Bercovici, J. (2014). The Same-Day War. *Forbes*, 193(6).
- Boyer, Kenneth Karel, Markham T. Frohlich, and G. Tomas M. Hult. "Semi-Extended Supply Chains." *Extending the Supply Chain: How Cutting-edge Companies Bridge the Critical Last Mile into Customers' Homes*. New York: American Management Association, 2005. N. pag. 49-79 Print.
- Corsten, D. and Gruen, T. (2003), "Desperately seeking shelf availability: an examination of the extent, the causes, and the effort to address retail out-of-stock", *International Journal of Retail & Distribution Management*, Vol. 31 No. 12, pp. 605-17.

- Feng, Baichun, Tao Yao, Bin Jiang, and Srinivas Talluri. "How to Motivate Vendor's RFID Adoption beyond Mandate? A Retailer's Perspective." *International Journal of Production Research* 52.7 (2013): 2173-193. Web.
- Fishbein, M. and Azjen, I.(1975), *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*, Addison-Wesley ,Reading, MA.
- Food Marketing Institute. Food Marketing Institute, 2014. Web.
- "Grocery Stores & Supermarkets." *Hoover's*. D&B Company, n.d. Web. 02 Nov. 2015.
- "HINC-07--Part 1." *HINC-07--Part 1*. U.S. Census Bureau, n.d. Web. 01 Jan. 2016.
- Hurley, Madeline. *Supermarket & Grocery Stores in the US*. Rep. N.p.: n.p., 2015. *IBISWorld*. Web. 18 Jan. 2016.
- Kucuk, S.U. (2008), "Can distribution explain double jeopardy patterns", *International Journal of Retail & Distribution Management*, Vol. 36 No. 5, pp. 409-25.
- "Mass Grocery Retail." *United States Food & Drink Report 2* (2012): 80-87. *Business Source Complete*. Web. 20 Jan. 2016.
- McKitterick, Will (2015). *IBISWorld Industry Report OD5085. Online Grocery Sales in the US*. Retrieved September 20, 2015 from IBISWorld database.
- Nilsson, Elin, Tommy Gärling, Agneta Marell, and Anna-Carin Nordvall. "Importance Ratings of Grocery Store Attributes." *Intl J of Retail & Distrib Mgt International Journal of Retail & Distribution Management* 43.1 (2015): 63-91. Web.
- Nielsen Newswire. (2011, May 31). Five things to know about grocery shopping. Retrieved from <http://www.nielsen.com/us/en/newswire/2011/five-things-to-know-about-online-grocery-shopping.html>

Palmer, J.W., Kallio, K., Saarinen, T., Tinnila, M., Tuunainen, V.K. and van Heck, E.

(2000), available at: <http://cais.aisnet.org>

Poston, Dudley L. Jr., and Leon F. Bouvier. "Age and Sex Composition." *An Introduction to Demography Population and Society* (n.d.): 228-64. *United States Census 2010*. U.S. Census Bureau, 2011. Web.

Prud'homme, Andrea M., and Kenneth K. Boyer. "An Analysis of Operations-oriented Drivers of Customers Loyalty for Two Service Channels." 1.2 (2007): 78-101. Web.

Smith, Diana. *Grocery Retailing- US*. Publication. N.p.: n.p., 2015. *Mintel*. Web. 20 Jan. 2016.

Webster, Gabriele. "Giant Eagle Market District: A Product for Every Occasion." *RetailNet Group* (n.d.): 1-9. *RetailNet Group*. Web.

APPENDIX

Analysis of traditional vs online/pick-up grocery services

Q1 Online Consent Form You are invited to take part in a research survey about your views on Giant Eagle's service quality, product range, and the benefits and sacrifices associated with choosing them as your grocer. The purpose of this research is to compare differences between traditional and online Giant Eagle customers. Your participation will require approximately 7-10 minutes and is completed online at your computer.

There are no known risks or discomforts associated with this survey. Taking part in this study is completely voluntary. If you choose to be in the study you can withdraw at any time without adversely affecting your relationship with anyone The Ohio State University. Your responses will be kept strictly confidential, and digital data will be stored in secure computer files. Any report of this research that is made available to the public will not include your name or any other individual information by which you could be identified. By choosing to participate in this survey you will be entered to win a \$25 Visa gift certificate. If accessing this survey through Mechanical Turk you will also receive a \$2 reward within 5 days of completion. If you have questions or want a copy or summary of this study's results, you can contact the researcher at toth.216@osu.edu. If you have any questions about whether you have been treated in an illegal or unethical way, contact study participation, you may contact Patricia M. West, Associate Dean of Undergraduate Programs in the Fisher College of Business at west.284@osu.edu. For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251 or hsconcerns@osu.edu."

Clicking the "I Agree" button below indicates that you are 18 years of age or older, and indicates your consent to participate in this survey.

- ☐ I agree (1)
- ☐ I do not agree (2)

If I do not agree Is Selected, Then Skip To End of Survey

Q2 I have shopped at Giant Eagle:

- ☐ In-store only (1)
- ☐ Through Curbside Express only (2)
- ☐ Both in-store and through Curbside Express (3)
- ☐ I have never shopped at Giant Eagle (4)

If I have never shopped at Gia... Is Selected, Then Skip To End of Survey

Q3 The price of products are important when selecting Giant Eagle.

_____ (0) Disagree (10) Agree

Q4 Convenience is important when selecting Giant Eagle.

_____ (0) Disagree (10) Agree

- Q5 Giant Eagle employees are responsive to my service requests.
_____ (0) Disagree (10) Agree
- Q6 Giant Eagle employees are competent in providing the expected service.
_____ (0) Disagree (10) Agree
- Q7 Giant Eagle employees are courteous in providing me service.
_____ (0) Disagree (10) Agree
- Q8 Giant Eagle employees are able to answer my service-related questions.
_____ (0) Disagree (10) Agree
- Q9 The tangible (appearance of trucks, staff, products) of Giant Eagle's service are excellent.
_____ (0) Disagree (10) Agree
- Q10 Giant Eagle has an excellent assortment of products.
_____ (0) Disagree (10) Agree
- Q11 Giant Eagle's products are among the best.
_____ (0) Disagree (10) Agree
- Q12 Giant Eagle has a sufficient range of product choices (I can get what I want).
_____ (0) Disagree (10) Agree
- Q13 The number of substitutions out of stocks is reasonable.
_____ (0) Disagree (10) Agree
- Q14 Giant Eagles' prices are low on the products they offer.
_____ (0) Disagree (10) Agree
- Q15 The time needed to make a purchase from Giant Eagle is low.
_____ (0) Disagree (10) Agree
- Q16 The effort required to make a purchase from Giant Eagle is low.
_____ (0) Disagree (10) Agree
- Q17 I would classify myself as a loyal customer of Giant Eagle.
_____ (0) Disagree (10) Agree
- Q18 I do not expect to switch to another grocer to get a better service in the future.
_____ (0) Disagree (10) Agree
- Q19 I would continue to do business with Giant Eagle, even if I had to pay more.
_____ (0) Disagree (10) Agree

Q20 I would complain to Giant Eagle employees if I experienced a problem with their service.

_____ (0) Disagree

(10) Agree

Q21 What percent of your grocery shopping do you do with Giant Eagle?

_____ (0) Disagree

(10) Agree

Q22 What is your gender?

☐ Male (1)

☐ Female (2)

Q23 What is your age?

☐ Under 18 years (1)

☐ 18 to 24 years (2)

☐ 25 to 34 years (3)

☐ 35 to 44 years (4)

☐ 45 to 54 years (5)

☐ 55 to 64 years (6)

☐ 65 to 74 years (7)

☐ 75 to 84 years (8)

☐ 85 years or over (9)

Q24 What is the highest level of education you have completed?

☐ Less than High School (1)

☐ High School / GED (2)

☐ Some College (3)

☐ 2-year College Degree (4)

☐ 4-year College Degree (5)

☐ Masters Degree (6)

☐ Doctoral Degree (7)

☐ Professional Degree (JD, MD) (8)

Q25 What is your annual income range?

☐ Below \$20,000 (1)

☐ \$20,000 - \$29,999 (2)

☐ \$30,000 - \$39,999 (3)

☐ \$40,000 - \$49,999 (4)

☐ \$50,000 - \$59,999 (5)

☐ \$60,000 - \$69,999 (6)

☐ \$70,000 - \$79,999 (9)

☐ \$80,000 - \$89,999 (7)

☐ \$90,000 or more (8)

Q26 Did you access this survey using Mechanical Turk?

- ☐ Yes (1)
- ☐ No (2)

If No Is Selected, Then Skip To If you are interested in being entered...

Q27 Please create a unique 6 digit numerical code that can be used to verify your participations. (example: 123456)

Q28 If you are interested in being entered to win a \$25 Visa gift card, please copy and paste the link below in your browser to enter your email address in a Google Form. This is to ensure that your email address remains separate from the responses you gave in the survey.

The Winner will be contacted via email by January 14th, 2016.

https://docs.google.com/forms/d/1U3Hs2pK4lzg7ePXuu_s5Ms16MVHea8UpjVyi4wWMII/viewform?usp=send_form